

WHAT IS CLAIMED IS:

1 1. A method in a cellular telecommunications  
2 network of constructing a list of cells comprising at  
3 least one cell in which network resources are to be  
4 allocated to perform a requested service, said method  
5 comprising the steps of:

6 determining each particular cell's capability to  
7 provide the requested service; and

8 building a cell list comprising only cells that can  
9 provide the requested service.

1 2. A method in a cellular telecommunications  
2 network of allocating network resources to perform a  
3 requested service, said method comprising the steps of:

4 determining each particular cell's capability to  
5 provide the requested service prior to allocating network  
6 resources in that cell; and

7 allocating network resources only in the cells that  
8 can provide the requested service.

1 3. The method of allocating network resources of  
2 claim 2 further comprising, before the step of allocating  
3 network resources, the step of building a cell list  
4 comprising only cells that can provide the requested  
5 service.

1 4. The method of allocating network resources of  
2 claim 3 wherein the network resources are paging  
3 resources for paging a mobile station, and the step of  
4 determining each particular cell's capability to provide  
5 the requested service includes determining the capability  
6 of each particular cell in a location area (LA) to  
7 provide the requested service.

1 5. The method of allocating network resources of  
2 claim 4 further comprising paging for the mobile station  
3 only in the cells of the LA that can provide the  
4 requested service.

1 6. The method of allocating network resources of  
2 claim 5 further comprising the steps of:  
3 determining that the mobile station did not respond  
4 to the paging in the LA;  
5 building a cell list for a paging area (PA)  
6 comprising only cells that can provide the requested  
7 service; and  
8 paging for the mobile station only in the cells of  
9 the PA that can provide the requested service.

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1        7. The method of allocating network resources of  
2 claim 6 further comprising the steps of:

3            determining that the mobile station did not respond  
4 to the paging in the PA;

5            building a cell list for a service area (SA)  
6 comprising only cells that can provide the requested  
7 service; and

8            paging for the mobile station only in the cells of  
9 the SA that can provide the requested service.

1        8. A system for constructing a list of cells  
2 comprising at least one cell in which network resources  
3 are to be allocated to perform a requested service, said  
4 system comprising:

5            a capabilities database that stores information  
6 identifying each particular cell's capability to provide  
7 each of a plurality of services;

8            a processor that compares the requested service to  
9 the information stored in the capabilities database for  
10 each cell in order to determine each cell's capability to  
11 provide the requested service; and

12            a resource controller that builds a cell list  
13 comprising only cells that can provide the requested  
14 service.

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1 9. A system for allocating network resources in a  
2 cellular telecommunications network to perform a  
3 requested service, said system comprising:  
4 a capabilities database that stores information  
5 identifying each particular cell's capability to provide  
6 each of a plurality of services;  
7 a processor that compares the requested service to  
8 the information stored in the capabilities database for  
9 each cell in order to determine each cell's capability to  
10 provide the requested service; and  
11 a resource controller that allocates network  
12 resources only in the cells that can provide the  
13 requested service.

1 10. The system for allocating network resources of  
2 claim 9 wherein the network resources are paging  
3 resources for paging a mobile station, and the  
4 capabilities database stores information identifying the  
5 capability of each particular cell in a location area  
6 (LA) to provide each of the plurality of services.

1 11. The system for allocating network resources of  
2 claim 10 wherein the processor compares the requested  
3 service to the information stored in the capabilities  
4 database for each cell in the LA in order to determine

5 the capability of each cell in the LA to provide the  
6 requested service.

1 12. The system for allocating network resources of  
2 claim 11 further comprising a cell list database that  
3 stores cell lists comprised only of cells that can  
4 provide the requested service.

1 13. The system for allocating network resources of  
2 claim 12 wherein the cell list database includes:

3 a cell list comprised only of cells in the LA that  
4 can provide the requested service;

5 a cell list comprised only of cells in a paging area  
6 (PA) that can provide the requested service; and

7 a cell list comprised only of cells in a service  
8 area (SA) that can provide the requested service.

1 14. The system for allocating network resources of  
2 claim 13 further comprising a paging mechanism that  
3 retrieves the cell list for the LA from the cell list  
4 database and pages for the mobile station only in the  
5 cells of the LA that can provide the requested service.

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1           15. The system for allocating network resources of  
2 claim 14 wherein the paging mechanism determines whether  
3 the mobile station responded to the paging in the LA, and  
4 if not, retrieves the cell list for the PA from the cell  
5 list database and pages for the mobile station only in  
6 the cells of the PA that can provide the requested  
7 service.

1           16. The system for allocating network resources of  
2 claim 15 wherein the paging mechanism determines whether  
3 the mobile station responded to the paging in the PA, and  
4 if not, retrieves the cell list for the SA from the cell  
5 list database and pages for the mobile station only in  
6 the cells of the SA that can provide the requested  
7 service.

1           17. The system for allocating network resources of  
2 claim 11 wherein the processor includes programming to  
3 compare the requested service to the information stored  
4 in the capabilities database for each cell in the  
5 network's service area in order to build a cell list for  
6 each LA in the service area, a cell list for each paging  
7 area (PA) in the service area, and a cell list for the  
8 entire service area, each of the cell lists comprising  
9 only cells that can provide the requested service.